



Define Status Quo and Alternatives

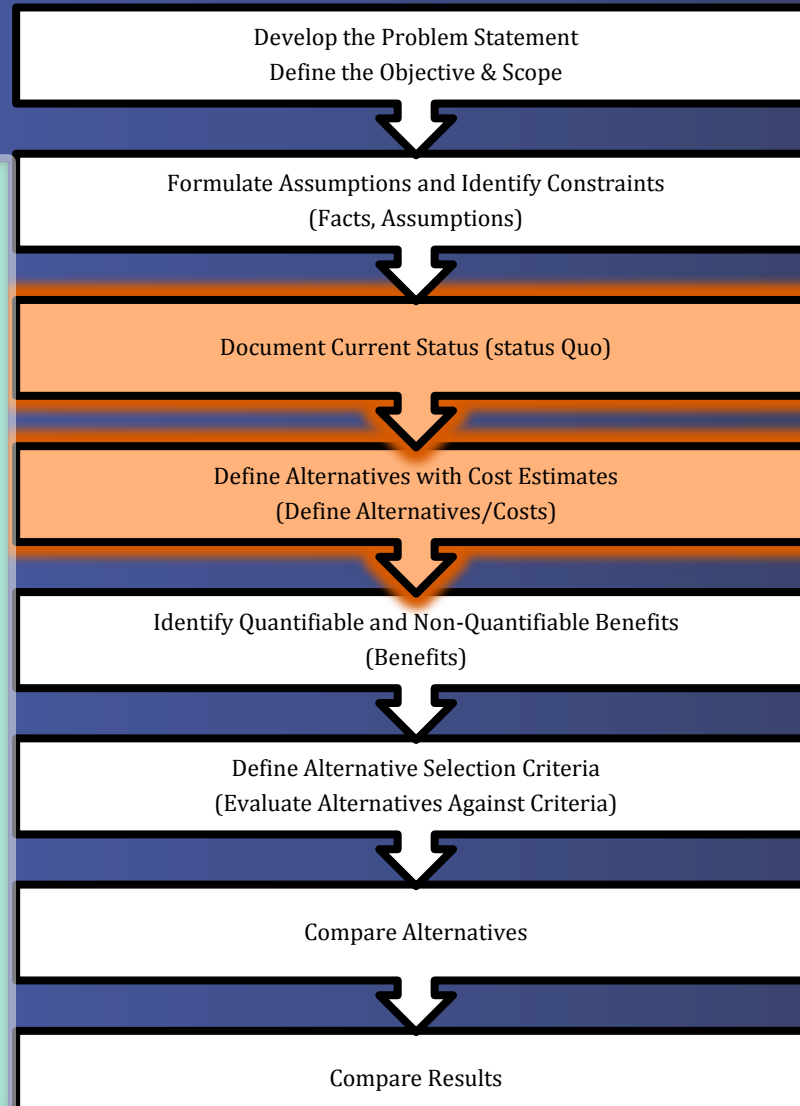


Practical Cost-Benefit Analysis

Lesson 5

04/27/2015

CBA Process



Costs

☐ Quantifiable Costs

- Direct
- Indirect
- Initial/Start Up
- Sustainment
- Procurement

☐ Non Quantifiable Costs

- Life/Health/Safety
- Perception/Image
- Opportunity
- Risk/Uncertainty
- Political

Benefits

☐ Quantifiable Benefits

- Cost Savings
- Cost Avoidances

☐ Non Quantifiable Benefits

- Greater Capacity
- Faster Availability
- Better Quality
- Improved Moral

Benefits Must Balance or Outweigh Costs

Learning Objectives

- Describe how the current state's description is different than other alternatives
- Compile and write a status quo statement
- Develop a list of alternatives
- Determine which alternatives are reasonable and reject infeasible alternatives



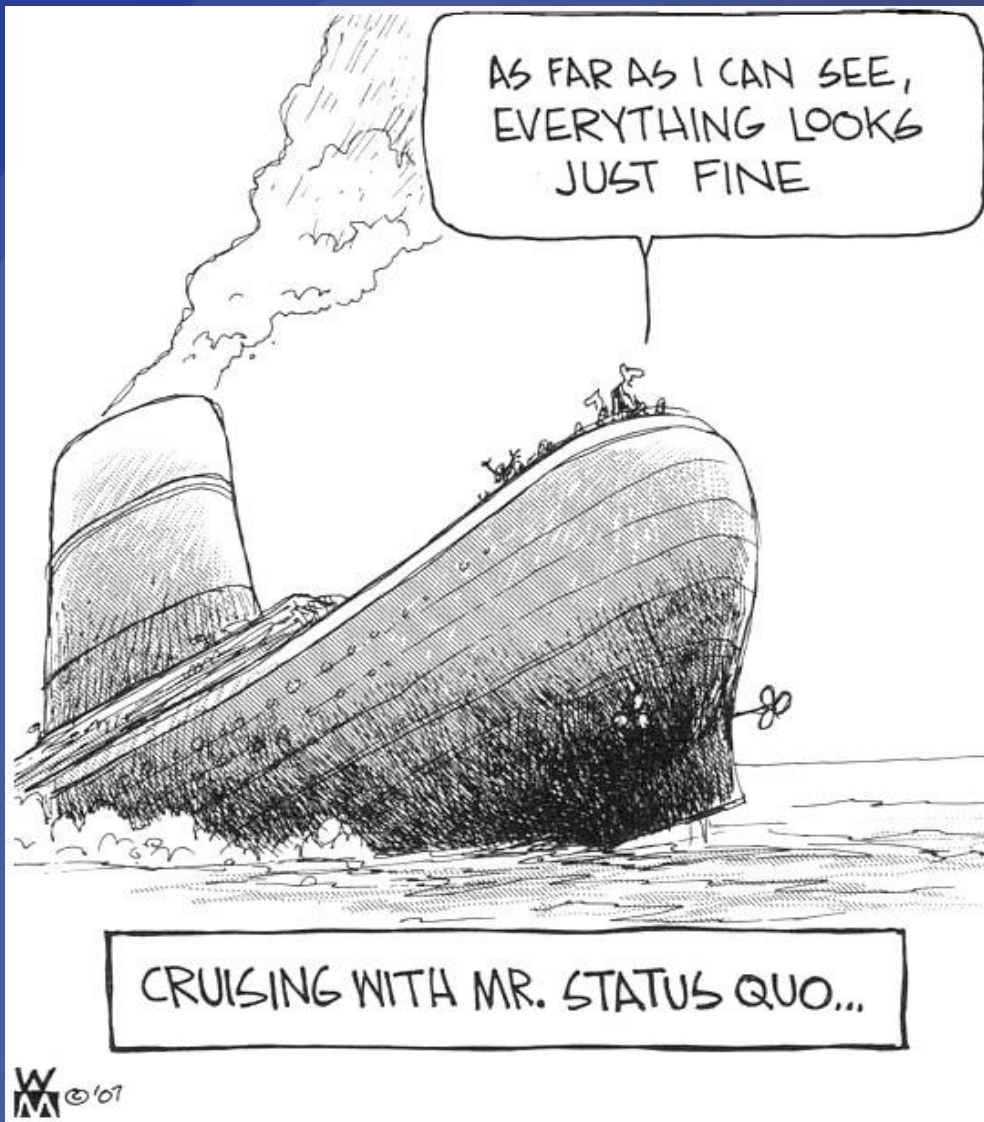
"We're ready to begin the next phase of keeping things exactly the way they are."

Current State Description (Status Quo)

- Establishes foundation against which the proposed investment decision can be evaluated. It describes:
 - The current process or state of operations
 - The users of the process output & why they value the output
 - The effectiveness of the current process
 - In terms of accuracy, rework or other measures (e.g. units per period of time, cost, excess byproducts, waste, or other quantifiable measure)
 - A brief root cause analysis if the Status Quo is less than desirable



The Status Quo



Always exists

- *"Nothing currently addresses the need"* is an acceptable Status Quo

- Presumes a new start

- *"Current law (or circumstances) requires Navy to change ..."*

- Implies Status Quo is not in the acceptable solution set

Does not include any changes from the current state

- A change is an alternative and must be set up as a COA

- Upgrading the Status Quo is often a good option to present

The Status Quo Description

- Includes
 - How the need (Problem Statement) is currently being addressed
 - Short falls (Qualitative & Quantitative)
 - Users and stakeholders
 - Technical descriptions to the extent that it bears on the analysis
 - Favor common knowledge over esoteric
 - Just enough detail to determine meaningful metrics to assign costs
 - System weight may be good for a mobile system
 - Sq Ft for an office building
- Describe reality; do not to paint a picture of doom and gloom
 - Just the facts
 - Does not contain any bias statements or opinions
 - *"This is the worst possible position to be in"*

Multiple Costs & Benefits to Status Quo



1. The Cost if it remains the selected option
2. The Cost of parallel operations while the replacement is being built
3. Benefit to other options if the Status Quo is eliminated
 - E.g., eliminated approved upgrades, integration complexities avoided

Status Quo is the baseline of comparisons

Example

Project:

- ❑ Designated 5 year comparison window
- ❑ Current state spending \$500 per year to run
- ❑ New option cost \$700 to implement, costs \$400 per year to run and will require 2 years to come online

- ❖ Cost of the Status Quo = $\$500 \times 5 \text{ years} = \2500
- ❖ Cost of the Status Quo during transition = $\$500 \times 2 = \1000
- ❖ Benefit of eliminating Status Quo at year 3 = $\$500 \times 3 = \1500
- ❖ Cost of new option by itself = $\$700 + (\$400 \times 3) = \$1900$

What is the Cost + Benefit of each option?

Is it?

Status Quo = \$2500

New Option = $\$1900 + \$1000 - \$1500 = \1400

OR

Status Quo = \$2500

New Option = $\$1900 + \$1000 = \$2900$

Non-standard Equipment Example

- Status Quo is missing – what would an acceptable statement be for a program with the following COAs?

COA #1: Transfer Excess NS-Equipment to Government of Iraq

COA #2: Ship Excess NS-Equipment to USFOR-A “as is”

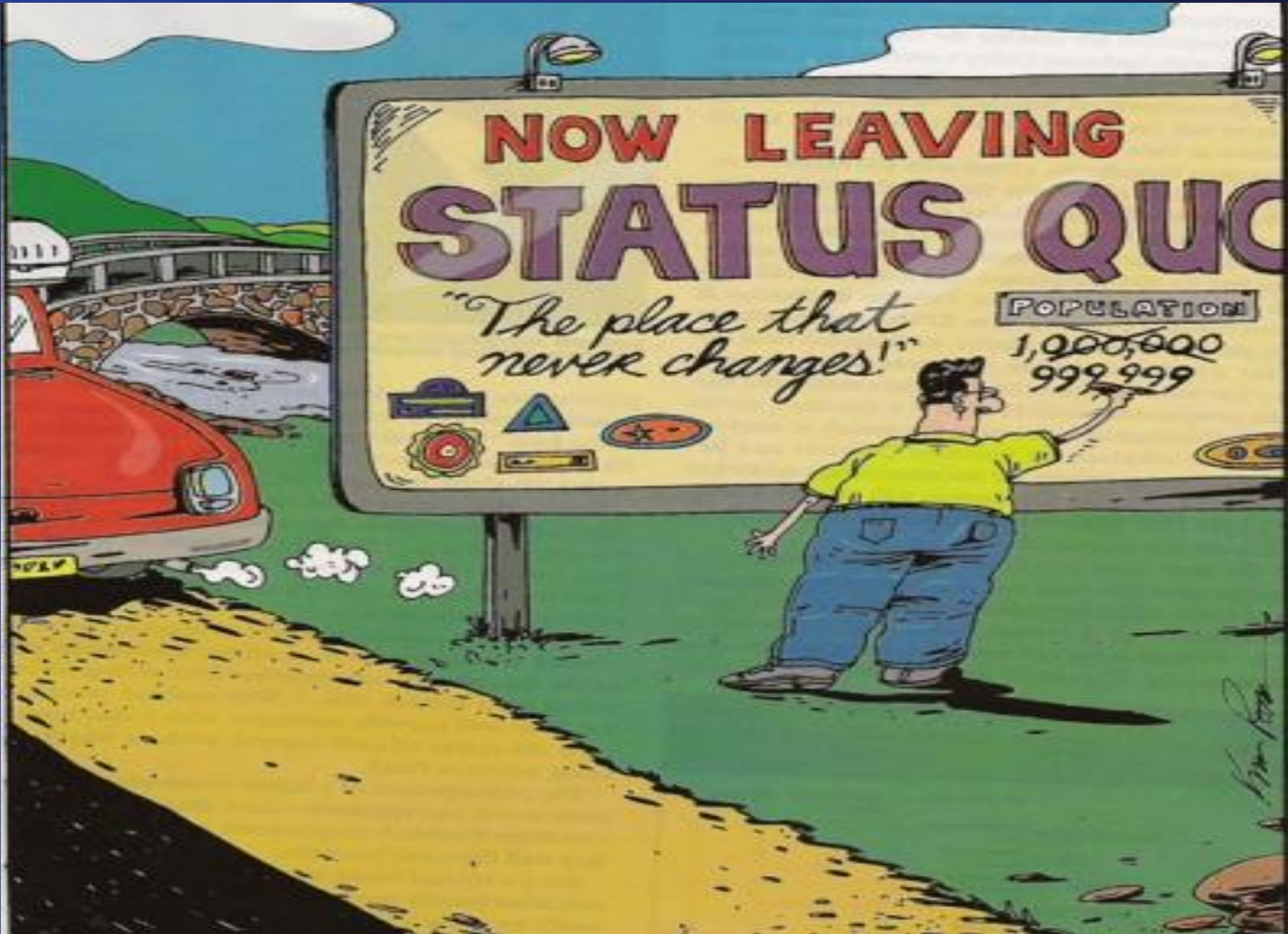
COA #3: Transfer Excess NS-Equipment to DRMO (Kuwait)

Stand-up ARFORCYBER Example

- Status Quo is missing – what would an acceptable statement be for a program with the following COAs?

- COA1: HQS ARFORCYBER (~106 PN) in Nolan Building (NB)
 - Displaces ~150 INSCOM PN Requiring SCIF Space
 - Locations: Fort Belvoir & TBD Location for INSCOM
- COA 2A: HQS ARFORCYBER CG & Key Staff (<15) in NB
 - Bed Down in NB with ACOIC
 - Remaining ARFORCYBER Staff (~90 PN) in Bldg 8543
 - Locations: Forts Belvoir & Meade (Bldg 8543)
- COA 2B: HQS ARFORCYBER CG & Key Staff (<15) in NB
 - Bed Down in NB with ACOIC
 - Remaining ARFOFCYBER Staff (~90 PN) in Leased or BRAC Space
 - Locations: Fort Belvoir & Surrounding 5-Mile Environs
- COA 3: HQS ARFORCYBER (~106 PN) in Bldg 8543
 - ACOIC Remains in NB
 - Location: Fort Meade

Other Alternatives



CBA must be forward looking, not historical.

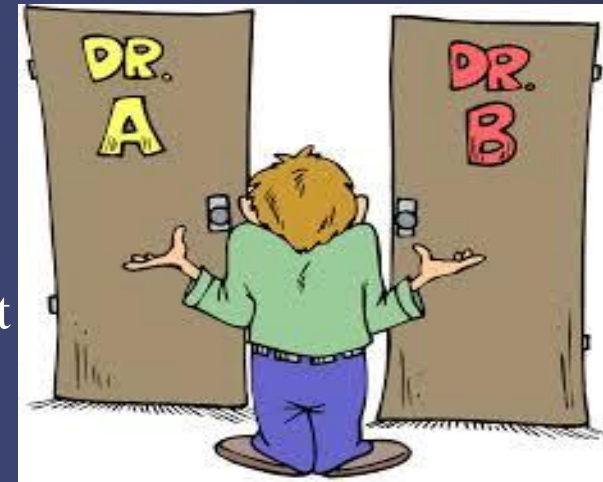
Status
Quo



Alternatives

Alternatives

- There must be a choice!
 - A sound analysis recognizes that there are alternative ways to meet the objective
 - A good analysis has more than 2 viable alternatives
- All feasible alternatives should be considered, documented and discussed
- Alternatives need to be distinct
 - Differences
 - Technology may be different
 - Source may be different - buy, lease, contract
 - Costs and benefits will be different



There must be more than one alternative!

Future State Description ("To-Be")

- Future state may also be thought of as the "To-Be" state, as compared to the current state / status quo.
- In order to better characterize the "To-Be" state, identify and describe each alternative considered:
 - a) brief description of the alternative
 - b) rough estimated costs & benefits (guess is acceptable at this point)
 - c) alternative pros & cons
- Remember to update Assumptions if you require new ones to make an alternative feasible
 - May need to assume congressional approval, changes in requirements, or end-user permission



Notes on Creativity

- Rules, **regulations** and **laws** can be changed
 - Don't expect large changes to solve small problems
- Watch for groups that limit the list to the first thing they thought of
- Don't waste time with unrealistic solutions
 - A Star Trek phaser may be exactly what you need – but it is not feasible in the current technology
- Don't create straw-man alternatives just to have something to shoot down
- Check wording to ensure no favoritism for any particular solution in the description



Caution on Bias

- **Inherent biases** prevent you from considering certain aspects or possibilities
 - Precedence of past actions or decisions
 - Nature of the organization
 - Dictated lists of alternatives from higher levels of management
- **Resource limitations** force a halt before all concepts are pursued.
 - Routine pressure of normal activities
 - Tradeoffs between time and the effort expended and the probability of new alternatives or additional data
 - Scope of the analysis (feasibility study vs. detailed project report)
 - Forced deadlines, limiting the analysis time

Potential Problems

- The boss, user or functional expert only wants one specific alternative.
 - A close look may reveal that there are different or alternative ways of getting the alternative, e.g., buy vs. lease the same design.



Approval of List of Alternatives

- User or functional proponent must agree that all alternatives can get the mission done
- The analyst, functional manager or user, and decision maker are highly interactive during this step
- *Try and get concurrence before going on with study*

Screened Alternatives

- During analysis some alternatives may have been screened out for not having met minimum screening criteria
 - Should be documented somewhere
 - Not normally mentioned in the main analysis
 - Can be in main analysis if
 - It is the Status Quo
 - It was specifically directed to be considered by higher ups
 - It is an “obvious” solution
 - Documentation
 - SHORT!
 - Why this alternative was eliminated
 - E.g., “Alt 6 was excessively costly at \$2.3 million”



Practice: What's wrong here?

Executive Summary

As the Executive Agent, DoDI 5110.11 states that the Army (114th Signal BN) is responsible for providing common IT, IM and telecom operations, management and related support services to Raven Rock Mountain Complex (RRMC).

This request for five additional DA Civilian (DAC) requirements will establish:
(1) two requirements for a new work center based on the increased number of Joint supported systems, networks, and IT infrastructure components based on equipment modernization and NMCS Transformation as outlined in ... (2) three requirements for day to day routine and, during national emergencies, lock-down maintenance services in support of 78 communication systems at RRMC.

Problem Statement

Currently 114th Signal Battalion does not have the requirements to support the additional 5 DACs.

Objective

The objective of this effort is to obtain 5 DAC requirements.

Alternatives

Alternative 1 is the Status Quo

Alternative 2 includes an additional 5 fully burdened DAC requirements

Summary

- Status Quo

- Required even if not viable
- Realistic (no overt doom and gloom)
- Baseline of comparison
- Carries two costs
 - Cost of continuing to use the status quo
 - Transition costs to opt for an alternate solution

- Alternatives

- Must have at least one that is viable (two if the status quo is not viable)



Exercise